

**REMARKS**

Applicants respectfully request reconsideration of the application, as amended, in view of the following remarks.

The present invention as set forth in **amended Claim 1** relates to a sinter powder, comprising:

at least one polyamide in the form of a particle; and

at least one member selected from the group consisting of a poly(N-methylmethacrylimide) (PMMI), a polymethyl methacrylate (PMMA), a PMMI-PMMA copolymer and mixtures thereof, in the form of a particle;

**wherein the size of the particles of PMMI, PMMA and/or the PMMI-PMMA copolymers is within 20% of the median grain size  $d_{50}$  of the polyamide particles.**

In contrast, Lescaut (US 6,123,987) fails to disclose or suggest that the size of the particles of PMMI, PMMA and/or the PMMI-PMMA copolymers is within 20% of the median grain size  $d_{50}$  of the polyamide particles.

All that Lescaut discloses is a composition which comprises, per 100 parts by weight of polyamide:

(i) from 0 to 25 parts by weight of phenolic polycondensate (A); and

(ii) from 0 to 25 parts by weight of polyalkyl (meth)acrylate (B), with the proviso that the total amount of additives (A)+(B) is at least 10 parts by weight.

The average size of the grains or particles comprising the pulverulent compositions of Lescaut generally ranges from 5 to 500  $\mu\text{m}$  and preferably from 10 to 250  $\mu\text{m}$ . See Lescaut, col. 1, lines 54-65.

Further in the Examples of Lescaut it is only required that the particle size of the powders is below 0.1 mm (i.e. below 100 $\mu\text{m}$ ) (Examples 1 and 2) or below 0.08 mm (i.e. below 80 $\mu\text{m}$ )(Example 3).

There is no disclosure or suggestion that the size of the particles of PMMI, PMMA and/or the PMMI-PMMA copolymers is within 20% of the median grain size  $d_{50}$  of the polyamide particles.

Therefore, the rejection of Claims 1-15 under 35 U.S.C. § 102(b) as anticipated by Lescaut (US 6,123,987) is believed to be unsustainable as the present invention is neither anticipated nor obvious and withdrawal of this rejection is respectfully requested.

Further, Staas and Dickens, Jr. et al fail to disclose or suggest that the size of the particles of PMMI, PMMA and/or the PMMI-PMMA copolymers is within 20% of the median grain size  $d_{50}$  of the polyamide particles. There is no disclosure or suggestion that the size of the particles of PMMI, PMMA and/or the PMMI-PMMA copolymers is within 20% of the median grain size  $d_{50}$  of the polyamide particles.

Staas (US 4,415,706) discloses compatible polymer blends of from about 1 to about 99 percent by weight of an imidized acrylic polymer, containing at least 5 percent by weight glutarimide units, and from about 99 to about 1 percent by weight of a polyamide or mixtures thereof. There is no disclosure or suggestion that the size of the particles of PMMI, PMMA and/or the PMMI-PMMA copolymers is within 20% of the median grain size  $d_{50}$  of the polyamide particles.

Dickens, Jr. et al disclose a laser-sinterable powder product which can be sintered in a selective laser sintering machine. A powder is disclosed that has a two-tier distribution in which substantially no primary particles have an average diameter greater than 180  $\mu\text{m}$ , provided further that the number average ratio of particles smaller than 53  $\mu\text{m}$  is greater than 80%, the remaining larger particles being in the size range from 53  $\mu\text{m}$  to 180  $\mu\text{m}$ . See the abstract of Dickens, Jr. et al. There is no disclosure or suggestion that the size of the particles of PMMI, PMMA and/or the PMMI-PMMA copolymers is within 20% of the median grain size  $d_{50}$  of the polyamide particles.

Thus, even a combination of Dickens, Jr. et al and Staas does not result in the present invention.

Therefore, the rejection of Claims 1-6, 9-10, 13-14 and 16-23 under 35 U.S.C. §102(b) as being anticipated by Staas (US 4,415,706) and the rejection of Claims 16-25 over Dickens, Jr. et al (US 6,123,948) in view of Staas (US 4,415,706) are believed to be unsustainable as the present invention is neither anticipated nor obvious and withdrawal of this rejection is respectfully requested.

The rejection of Claims 1-8, 13-15, 17-20 under 35 U.S.C. § 112, 2<sup>nd</sup> paragraph, is obviated by the amendment of the claims.

The rejection of Claim 3 regarding the term “unregulated” is traversed. At page 4, line 12, of the specification it is disclosed that the sinter powder of the invention preferably comprises an **unregulated** polyamide. This is claimed in Claim 3. DE 35 10 691 is discussed at page 4 of the specification as a reference disclosing a process for preparing the polyamide powders on which the sinter powder of the invention are based. See page 4, lines 17-20.

In addition, Example 1 at page 13 of the specification discloses that unregulated PA was used as prepared by hydrolytic polymerization by a method based on DE 35 10 691.

U.S. 4,687,838 is the English language equivalent of DE 35 10 691 (as shown by the DERWENT SEARCH REPORT filed herewith). According to U.S. 4,687,838 at col. 3, last line to col. 4, line 5:

“The polyamides produced by hydrolytic polymerization can be prepared with a controlled or uncontrolled molecular weight, that is, in the absence of any chain stabilizers, such as acetic acid, benzoic acid, adipic acid, azelaic acid, sebacic acid, and dodecanoic diacid.”

Therefore the meaning of “unregulated” in Claim 3 is clear and the rejection should be withdrawn.

**Please consider the Information Disclosure Statement filed herewith.**


This application presents allowable subject matter, and the Examiner is kindly requested to pass it to issue. Should the Examiner have any questions regarding the claims or otherwise wish to discuss this case, he is kindly invited to contact Applicants' below-signed representative, who would be happy to provide any assistance deemed necessary in speeding this application to allowance.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.  
Norman F. Oblon

Customer Number  
**22850**

Tel: (703) 413-3000  
Fax: (703) 413 -2220  
NFO:KAG:

  
Kirsten A. Grueneberg, Ph.D.  
Registration No.: 47,297